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(54) RESONANT WAVEGUIDE SLOT ARRAY.
(51) H01Q13/18; H01Q3/26; H01P1/207.
(71) Hazeltine Corp.
(72) Frazita, R.F.; Lopez, A.R.
(31) 497349; (32) 23 May 1983; (33) US.
(31) 497350; (32) 23 May 1983; (33) US.
(74) HHL.

☒ figure, 10, 3 for 208213

(57) A resonant waveguide aperture manifold 200 for monitoring the electromagnetic radiation from an antenna has short circuit reflecting terminations 201, 202 at each end of a transmission line. A transducer 203 provides an electrical output signal and is impedance matched to the waveguide as if non-reflecting terminations were at each end of the waveguide. The waveguide input is a plurality of groups of slots 206-214 wherein adjacent slots in each group may provide alternate polarity signals and adjacent groups may provide alternate phase signals. A standing wave created in the waveguide has a plurality of cells of alternating phase; each slot being located within one of the resonating standing wave cells. The resulting beam-receiving characteristic is said to be temperature and frequency independent over a practical range.